Factors in the Acquisition of the Present Subjunctive in Spanish : The Role of Reading and Study

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Abstract

University level students of Spanish were tested on their (acquired) competence in the subjunctive. Free reading in Spanish was a significant predictor of subjunctive competence, but length of residence in a Spanish-speaking country, formal study, and specific study of the subjunctive were not significant predictors. These results are consistent with previous research on free reading in English as a first and second language.

Introduction

In previous studies, it was reported that actual experience using Spanish was a better predictor of competence in the subjunctive than was formal study (STOKES, 1988; STOKES and KRASHEN, 1990). In this study, we probe deeper into this issue in several ways : In light of the massive evidence that free reading contributes to the development of literacy, in first and second languages (KRASHEN, 1993), as well as to the development of competence in complex grammatical structures (LEE, KRASHEN and GRIBBONS, 1996), the amount of free reading done was added as a possible predictor. In addition, a more sensitive measure of formal instruction was used. In addition to asking subjects how many years they had studied Spanish formally, we also asked about specific study of the subjunctive.

Method

Participants were 59 students of Spanish at the university level. All subjects took a test probing competence in the use of the subjunctive. As in the original study (STOKES, 1988), the test attempted to focus the students on communication, not form. Thus, we intended to obtain a sample of their acquired competence, rather than their consciously learned competence. Subjects were told that they were being interviewed as part of a study of attitudes toward college classwork, and that only the instructor (J.S.) would hear the tape. Subjects were asked to complete 19 sentences such as the following in Spanish, saying the first thing that came to their mind:

    1. Siempre estudio cuando ...
    2. Los profesores generalmente dan exámenes para que los estudiantes ..
    3. Espero conocer a algún profesor que ...

Test reliability was calculated in two ways, with similar results. Split-half reliability was .56 and was .50 according to the Kuder-Richardson formula 20. We discuss the possible consequences of this low level of reliability below.

All subjects then filled out a questionnaire asking them to indicate:

1. The amount of formal study they had in Spanish (one quarter hour credit of college study was awarded one point, and one year of high school study was awarded eight points. Ten points were awarded for eight weeks of intensive missionary training);
2. Length of residence in a Spanish-speaking country (in months);
3. The amount of free voluntary reading they had done in Spanish (total number of hours);
4. The adequacy of instruction they perceived they had had on the subjunctive, rated on a four-point scale (0 = non-existent, 1 = superficial, 2 = adequate, 3 = thorough);
5. Whether they were aware of the true nature of the subjunctive test. Subjects were asked "Did you at any time during the interview realize the actual purpose of the interview, i.e. to gather data on indicative/subjunctive use?". Only two students said they realized the purpose of the interview,

while seven said they suspected it, and one subject did not respond to this question.

Results and Discussion

Table 1 presents descriptive statistics. Data on subjunctive study was missing for three subjects, who were assigned a score of 1.3, the overall mean. Scores on the subjunctive test were similar to those found in the previous study (STOKES, 1988). Subjects in this study reported somewhat more formal study of Spanish and more foreign residence (mean of foreign residence in the previous study was 12.9 months).

TABLE 1

Descriptive statistics

	mean	standard deviation
Subjunctive test score	11.153	1.937
Amount of formal study	28.68	14.51
Length of residence	20.93	9.32
Free reading	715.2	650.0
Subjunctive study	1.304	.786

Parametric statistics were applied to the data, assuming that any violations from interval equality were not large enough to distort the results (for discussion, see KERLINGER, 1976, pp. 402-403.). Inspection of Table 2 shows that the predictor variables are not highly correlated with each other; thus, there is no problem of multicollinearity. It is also of interest that the amount of formal study of Spanish reported was not correlated with the amount of study of the subjunctive.

TABLE 2

Intercorrelations

	subj test	study	LOR	reading
study	-.039			
LOR	.128	-.158		
reading	.278	-.019	.13	
subj study	.230	.03	.019	.195

TABLE 3

Multiple regression

predictor	b	beta	t	p
study	-.00345	-.0258	-.20	.843
LOR	.01885	.0907	.69	.49
reading	.00067	.2253	1.71	.092
subj study	.457	.1855	1.42	.161

$r2 = .117$; adjusted $r2 = .052$
$F = 1.79$ $p = .145$

Multiple regression analysis (Table 3) showed that free reading was the best predictor of performance on the subjunctive test, reaching the .10 level of significance. This result is consistent with those of previous studies showing the impact of free reading on the development of literacy and acquisition of complex syntax. Next best was specific study of the subjunctive, which, however, failed to reach even the .10 level of significance. The regression coefficient for length of residence was positive, but fell far short of significance. This result differs from that of our previous study (STOKES and KRASHEN, 1990). In agreement with previous results, however, amount of formal instruction in Spanish showed no relationship at all with performance on the subjunctive test.

While reading was significantly related to subjunctive accuracy, the effect was very modest ($r = .278$). The raw regression coefficient for reading was about .0007, which means that one hour of reading raised a subject's score on the subjunctive test about .0007 points; it would take 1000 hours of reading to raise the score .7 points. While this seems like a lot of reading, it actually amounts to a few years of relaxed free reading, and corresponds to the intuition that acquisition of the subjunctive is late, and occurs gradually over time, with exposure to a great deal of literate language.

It has been hypothesized that reading and intensive study result in different kinds of competence, the former resulting in subconsciously acquired competence and the latter resulting in consciously learned competence. While our measure aimed at probing acquired competence, it may

have not been completely successful, which would account for the positive and near-significant impact of subjunctive study.

Second Analysis

A separate analysis was run of those 49 subjects who claimed that they were not aware that the test probed competence in the use of the subjunctive. It was predicted that this would be a purer test of acquired competence and would result in higher correlations of scores on the subjunctive test with predictors reflecting comprehensible input (length of residence and reading) and a lower correlation with study of the subjunctive.

TABLE 4

Descriptive statistics, adjusted sample (n = 49)

	mean	standard deviation
Subjunctive test score	10.959	1.893
Amount of formal study	28.18	14.30
Length of residence	20.96	9.69
Free reading	738.2	678.6
Subjunctive study	1.258	.721

TABLE 5

Intercorrelations, adjusted sample

	subj test	study	LOR	reading
study	.032			
LOR	.083	-.110		
reading	.337	.048	.118	
subj study	.126	.024	.000	.246

TABLE 6

Multiple regression, adjusted sample

predictor	b	beta	t	p
study	.0069	.0518	.36	.718
LOR	.0099	.0505	.35	.726
reading	.000898	.3222	2.19	.034
subj study	.119	.0454	.31	.757

$r2 = .12$; adjusted $r2 = .04$

$F = 1.50$ $p = .218$

As shown in Tables 5 and 6, restricting the sample this way actually weakened the predictive power of length of residence, but in neither analysis was it significant, nor was the change statistically significant ($z = .787$). The effects on other predictors, however, were in the predicted direction: Amount of free reading became a stronger predictor, while study of the subjunctive weakened considerably. The simple correlation between reading and subjunctive test scores increased from .278 to .337, while the correlation between subjunctive study and test scores dropped from .230 to .126. The increase in the size of the correlation for reading fell just short of the .10 level of significance ($z = 1.14$, $p = .127$) and the decrease of the size of the correlation for subjunctive study was significant ($z = 1.77$, $p = .038$).

More importantly, in the second analysis the regression coefficient for subjunctive study was not even remotely close to statistical significance, while the regression coefficient for reading was statistically significant, and the gap in effect sizes between the two predictors (betas) was much wider. This strongly suggests that we succeeded in utilizing a purer measure of acquired competence and provides additional support for the reading hypothesis.

Our study suffered from several flaws, which probably accounted for our modest r2, i.e. our inability, in both analyses, to account for more than about 12% of the variability in subjunctive scores. The most obvious culprit is the low reliability of our dependent variable, the subjunctive test : Measurement errors in the dependent variable "lead to a downward bias in the estimation of r2" (PEDHAZUR, 1982, p. 231) in multiple regression. Our measure of time spent reading was crude, we had only one measure of subjunctive competence, and there was limited variability in the subjunctive test scores.[1] It is

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(1) Inspection of the histograms revealed that reported free reading was clearly skewed. Application of a simple square root transformation removed nearly all of the skewness, resulting in a near-normal distribution. Use of the transformed data resulted in higher simple correlations with scores on the subjunctive test ($r = .312$ for all subjects, $r = .391$ for the adjusted sample). The impact of other predictors in the multiple regression analysis was essentially unchanged, but the regression coefficient for free reading improved ($b = .0426$, $p = .03$ for all subjects; $b = .0548$, $p = .01$ for the adjusted sample) as did the overall r2 (.148 and .161 for the two analyses; adjusted r2 = .084 and .085).

also not yet clear why length of residence succeeded in predicting test scores in the previous study but not in this one.[2] Low reliability of the subjunctive test, however, does not diminish the clear impact of reading, and our results are consistent with those of previous studies as well as theory.

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(2) A likely suspect is a limited range of length of residence reported by subjects in the second study. The first study (STOKES, 1988) included seven subjects (out of 27) who had no residence abroad, while this study had only three (out of 59). To confirm that the presence of subjects with no time abroad reduced correlations, we re-analyzed data from both studies excluding all subjects with no time abroad. In each case there was a drop in the size of the correlation, suggesting that some attenuation occurs when subjects with no residence abroad are excluded.

	correlation of residence abroad and subjunctive test score	
study	full sample	excluding subjects with no time abroad
Stokes (1988)	.51	.405
this study	.083	-.01